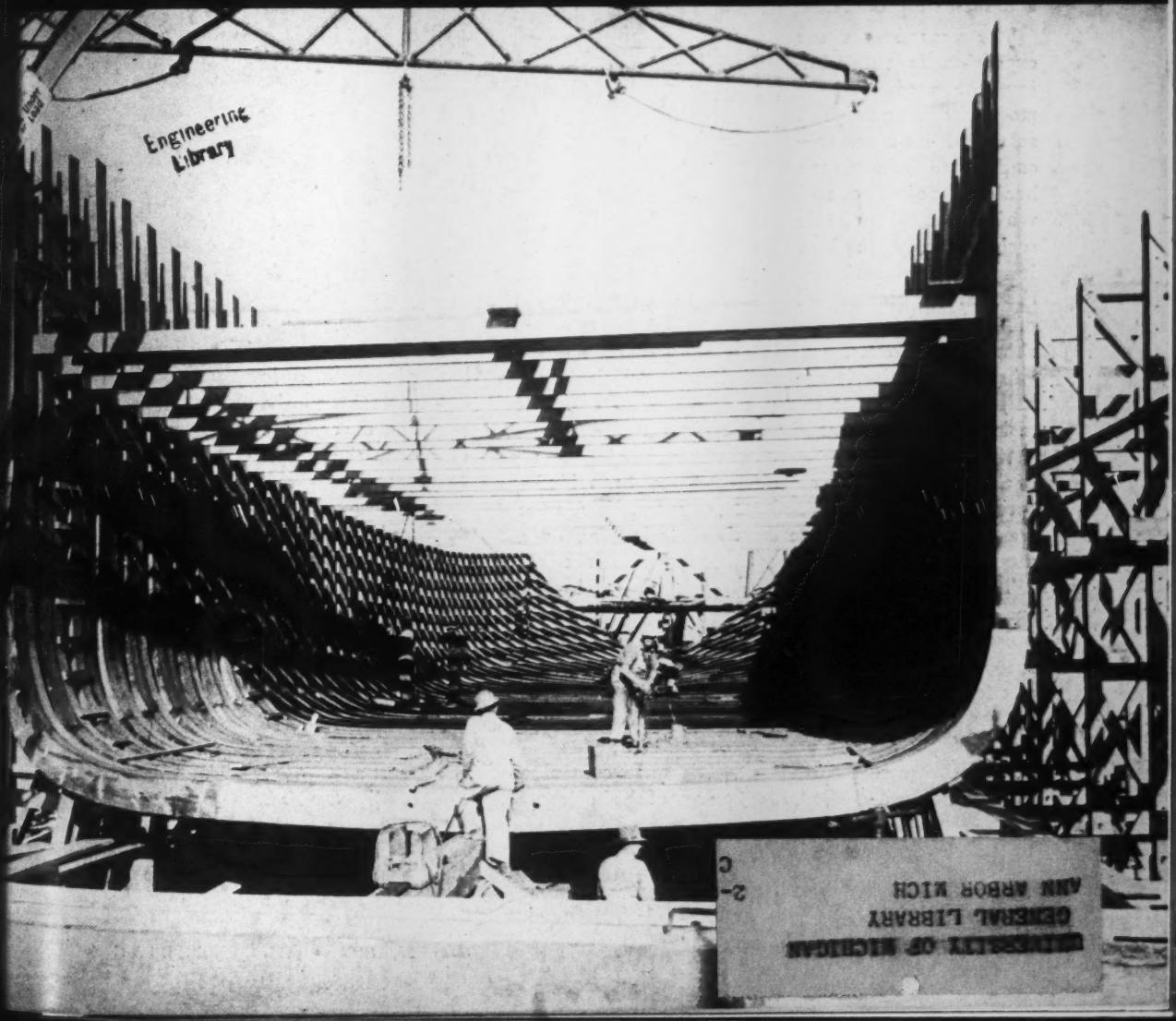
ENGINEERING NEWS-RECORD

el plate shortage inspires construction of 200-ft. timber barges shaped like a ship.



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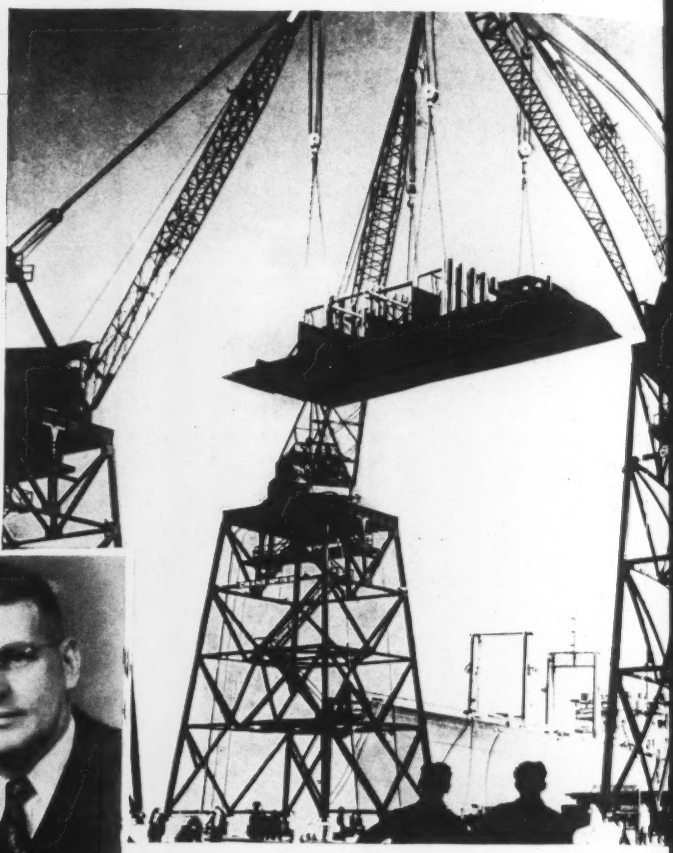
The Shipyard Crane That Makes Haste Slow

by
W. C. Raube,
Industrial Engineering Dept.,
General Electric Company



ON shipyard cranes, accurate control of low speed while lowering equipment, sections of bulkhead, etc. into position, and the ability to *inch the load into place*, are important factors that enable shipbuilders to save time and increase production.

The recent stupendous expansion in shipbuilding the yards for the most part being supplied solely with a-c power—emphasized the need for a braking hoist control which would provide such accuracy in load lowering. Automatic mechanical load brakes, used on cranes in machine shops, warehouses, etc. where the service is not severe, are unsatisfactory for shipyard use because of the excessive wear of friction disks and the resultant high cost of maintenance.

Thus, there was the problem of developing a type of electric crane-hoist control which would provide low-speed lowering, safety, and ease of spotting. A system was designed which uses d-c dynamic braking on a-c motors, the d-c supply being self-contained on the crane.

This system allows a wide range of low lowering speeds, and is far superior to any other type of braking hoist control. The lowest lowering speed (with full load) provided by other a-c control systems is still too fast for satisfactory and accurate operation. Using this system, on a typical controller having four low-speed points, full loads can be lowered at *62, 38, 16, or 6 per cent* of the rated hoist speed. This same control can lower a half load at *30, 19, 7, or 3 per cent* of the hoist speed.

This system operates in a conventional manner w lifting loads. When lowering a load, the stator wi is excited from the d-c source. The motor acts as a g ator, and the energy of the overhauling load is abs as heat in the motor secondary resistor. The latte be adjusted by means of the master switch. Thu braking torque varies within wide limits, and the l ing speed can be controlled with great accuracy.

Equally important is the control provided, w enables the operator to lower an empty hook as a rately as he lowers a load. Either the empty ho the load can be jogged into position with equal fa

This is another example of the application of experien skill by General Electric to solve a problem created by t conditions. If you have a difficult problem on which we of help, we would like to work with you. General Electr Schenectady, New York.

GENERAL ELECTRIC

655-33-8498

The Week In Engineering and Construction

INEERING NEWS-RECORD • MAY 27, 1943 • VOLUME 130 • NUMBER 21

en. Reybold directs fight n floods in six states

ief of Engineers takes charge as troops are called to d levees in parts of Oklahoma, Arkansas, Missouri, sas and Indiana.

r General Eugene Reybold, Chief neers, U. S. Army, has left Wash- to take charge of the forces now the floods that are sweeping six Midwest states. For the me, army engineer troops have alled from their training camps effort to hold weakened levees on us fronts in the flooded areas. egiments, including the 95th Engi- colored unit just back from the Highway, are on this work, also us auxiliary battalions and com- The task is not new to some units because those from Camp me, La., already have received in flood fighting in anticipation such an emergency. All are tting valuable training in the use ipment under emergency condi-

ral Reybold is an old hand at floods, having been district engi- Memphis during the 1937 flood. ving spent much of his engineer- reer in the Mississippi Valley.

Six weeks of heavy rain

vy and frequent rains during the weeks in many parts of the Mid- states of Oklahoma, Arkansas, ri, Kansas, Illinois and Indiana aused high water and some record Until recently these were chiefly utaries of the main rivers of the ippi valley. The Arkansas and ite were the first large rivers to ted (*ENR* May 20, p. 720). Wap- Dam, a detention reservoir built St. Francis River in southeastern ri two years ago, saved that valley ods though the levees that formed the project have not been com-

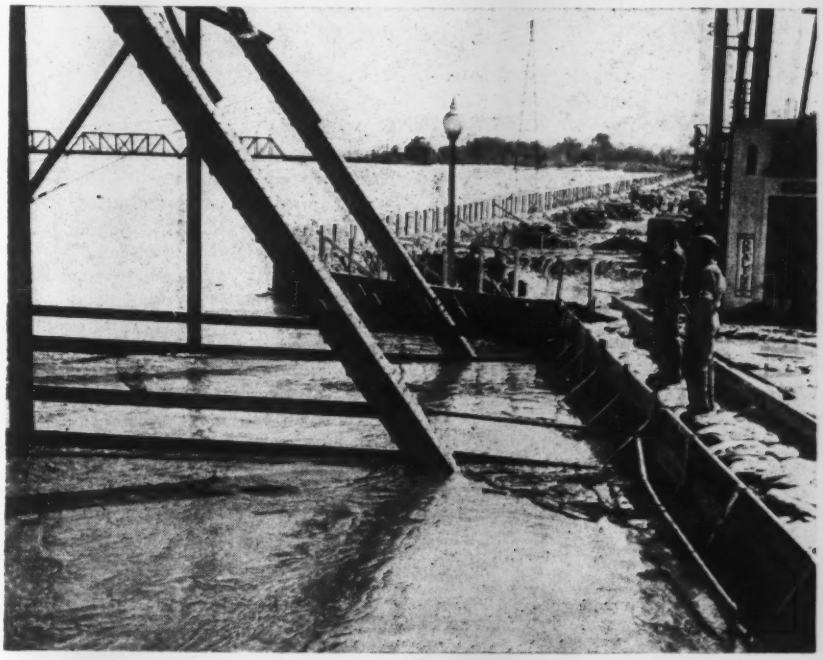
affected were the states of Illinois diana, where the Illinois, Sanga- ankakee, and Kaskaskia rivers in ississippi watershed, and the White and Maumee in the Ohio basin were swollen by rains. About the same time last week, the lower Missouri from Jefferson City to the mouth at St. Louis, and the Gasconade and Osage rivers west of St. Louis went on a rampage. Then the Arkansas got a second serious rise as its upper reaches and the tributaries in Oklahoma and Kansas went into the worst floods in their history. Streams in this area include the main stem of the Arkansas, the Neosho, Grand, and the Verdigris.

All through the flooded area the streams rose to record levels. topping previous high marks set in 1844, 1913 and 1926. Because, in most cases, the rise was slow and prolonged rather than flashy, main damage has been due to inundation, especially of farmlands, estimated at more than a million acres, and causing concern about crops and food supplies next fall. Little damage to structures has been reported, and except at Ft. Smith, Ark., no sewerage or water systems have been put out of commission. At Ft. Smith both the railroad and highway bridges across the Arkansas river have failed. The Army built a ponton bridge for emergency traffic and to carry temporary water lines to the city to replace those swept away by the main river flood.

Road and rail traffic disrupted

Highway and railroad traffic has been disrupted generally throughout the six states of Illinois, Indiana, Missouri, Kansas, Arkansas and Oklahoma. Levees by the scores have been overtopped, but except for a few isolated cases, these levees are those of local drainage districts, many of them old and in poor condition. Few levees built by the Army engineers as part of the main flood-control system have failed.

When the Arkansas and White rivers



At Beardstown, Ill., soldiers and civilian volunteers worked day and night to erect a 3-ft. barrier on top of the flood wall to keep the waters of the Illinois River out of the city. Their work thus far has been successful.

in Arkansas threatened to top their levees two weeks ago, engineer troops were rushed to the scene with sandbags, bulldozers, shovels and other flood-fighting equipment. They are credited with saving much valuable farmland along the White, and lost only a few local district levees along the Arkansas. Parts of Little Rock were flooded, and several small communities in eastern Arkansas were inundated. Previous high stages at Little Rock were 34.6 ft. in 1833 and 33.0 ft. in 1927. The highest in the present flood was 28.4 ft. on May 17, and a second crest of 27.0 ft. is expected this week.

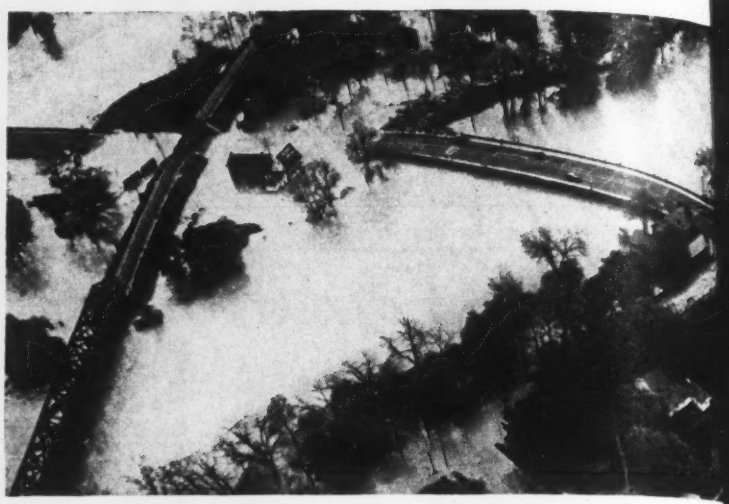
The broken "Big-Inch" oil line across the Arkansas below Little Rock is being temporarily replaced by two 20-in. lines across a railroad bridge.

There was no rest for the troops, for as the lower river started to fall a serious situation developed further west in Oklahoma and Kansas, and they were rushed to the new front. The Neosho rapidly filled the 1,680,000 ac. ft. Pensacola reservoir on the Grand River in Oklahoma, rendering it useless for further flood-control purposes, and renewing the controversy between power and flood control interests as to just how the reservoir should be operated. About 307,000 cfs. are now spilling over Pensacola Dam. Markham Ferry and Gibson dams, below Pensacola, started but abandoned in the face of material shortages caused by the war, would have helped a lot in the present situation.

Muskogee is the worst spot on the middle Arkansas River. Flood stage there is 26.0 ft., and the previous high of 38.0 ft. was reached a week ago. A crest of 48.0 ft. is predicted early this week. The Oklahoma Ordnance Plant below Muskogee at Prior, has been shut down, and the ordnance plant at Choteau is threatened. The Verdigris River, which flows through eastern Kansas and Oklahoma into the Arkansas River, has caused some trouble at Coffeyville, Kan., and has flooded numerous highways in that area, blocking access to some of the war plants. Both the Arkansas and Verdigris are falling in their upper reaches.

Missouri and Mississippi floods

The swollen Missouri River made a new junction with the Mississippi at St. Charles, temporarily trapping thousands of people on the new island and shutting down the Weldon Springs Ordnance Plant. The crest has been passed, for the Gasconade and Osage, principle tributaries immediately upstream, are falling. Bagnelle Dam on the Osage stood the flood test, though



Piddle's Island, in the Wabash River, was partially inundated and this road le to the south side residential district of Logansport, Ind., disappeared under Some 10,000 residents in 20 Indiana counties were made homeless by the flood picture was made by fliers of the Bunker Hill Naval Air Station.

the flow from sluiceways and the spillway for a time threatened to engulf the powerhouse.

At present the main stem of the Mississippi between the mouths of the Missouri and the Ohio is the most critical spot in the flood area. Engineer troops and prisoners of war are fighting to hold levees on both sides of the river as the crest from the Illinois moves into the main channel. Here again, it is the local district levees that are giving the most trouble; the Army built levees are holding. The main flood-control system for the Mississippi, built under the Jadwin plan, starts further south at the mouth of the Ohio.

Levees overtopped in Illinois

Every levee on the Sangamon and the Kaskaskia rivers in central Illinois has been overtopped by record stages in those streams, resulting in the most serious crop loss in the whole flood area. Parts of Vandalia and Springfield have been inundated, and thousands of people in rural districts and small towns in the valleys of the two rivers have been made homeless. All the levees on the two streams were built by local districts.

The Illinois River is causing serious trouble at Peoria, Beardstown and Alton. At Peoria, the R. G. Le Tourneau Co. plant has been flooded, and the big Caterpillar Co. plant is threatened. All employees are fighting to hold a local-district levee surrounding the plant. This levee is built to El. 457.8; the predicted flood crest is El. 456. Previous high stage in Peoria was 454.6 in 1844.

At Beardstown, on the Illinois ju low the mouth of the Sangamon long concrete floodwall, built t 447.5, has been overtopped, but t and civilian workers so far have out the flood by sandbags and boards. All women and children been evacuated from the city in a pation of possible trouble when expected crest at El. 449.5 reache city early this week.

Railroad yards near Alton, on Illinois side of the Mississippi, been flooded. Rail, highway and transportation have been seriously fected throughout the area, but no tural damage of any importance been reported. All of the cities the Illinois River have well water plies, which are still intact.

As the crests from the Illinois Missouri rivers pour into the Missis St. Louis is expecting a high stage 38.0 ft. early this week, equal to previous record set in 1903. East Louis is expected to remain safe protection of flood-control struct completed a few years ago.

Trouble along the Wabash

The Wabash River in western Ind and its tributaries, the White and M mee, have spilled over thousands of of farmland in the state and have dated parts of Peru, Logansport, Ind

(*Continued on page 9*)

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esident suggests way to implement vance plans for postwar public works

ral, state and local activity in preparing designs and specifica- would be aided by grants from a $85,000,000 fund

President this week recommended gress a broad plan for the financ- advance design and planning of works—federal and non-federal— ndertaken after the war. In two es to Congress he announced that estimates are to be prepared for propriation to cover planning by agencies and also transmitted a f legislation setting up an $85,- fund for state and local activity. ay the groundwork for a federal m of public works, the President tructed each of the federal agen- ncerned with construction to draft ram of advance design activity and pare requests for the necessary . These will then be correllated budget and the National Resources ing Board into an appropriation r submission to Congress.

legislation on non-federal public includes two major features. A 0,000 fund would be established distributed as outright grants to ates on a basis of population and This would be intended to finance l planning activities, city, regional, tate.

econd fund of $75,000,000 is to be buted, by whatever agency the ent directs, to non-federal local es to be used for advance design nite projects. On the usual 5 per- rule, this would permit design of ts with a total cost of about a and a half. The money would mbursable if and when the projects ed are actually built—to be repaid out of whatever money, federal or local, is used for the construction of the projects.

• • •

C. H. Sells to direct N. Y. State public works

Charles H. Sells of Pleasantville, former Westchester county commissioner of public works, was named superintendent of public works for New York State by Governor Dewey on May 20. He will succeed Arthur W. Brandt.

A native of Yonkers and a construction engineer of international reputation, Sells returned early this year from Iran, where for 13 months he directed a $16,000,000 lend-lease construction program of supply lines through Iran to Russia. Since then he has surveyed airport projects in Brazil for the federal government. Mr. Sells received his engineering degree from the University of Colorado in 1914. He was public service commission engineer in 1915 during construction of the New York City subways and in 1921 became assistant engineer of Westchester County. As county engineer from 1935 to 1938, and Westchester public works commissioner from 1938 until just before he went to Iran in January, 1942. Mr. Sells worked with the state public works department on numerous projects. The department which Mr. Sells will head includes the bureau of canals, highway, public buildings, architecture and surveying. The superintendent is also a member of the flood-control and postwar planning commissions.

• • •

NHA approves 2,000 new units for Baltimore

Included in 2,000 housing units projected by private builders in the Baltimore metropolitan area, approval of which was granted May 3 by the National Housing Administration, are 400 houses for rental to negro war workers.

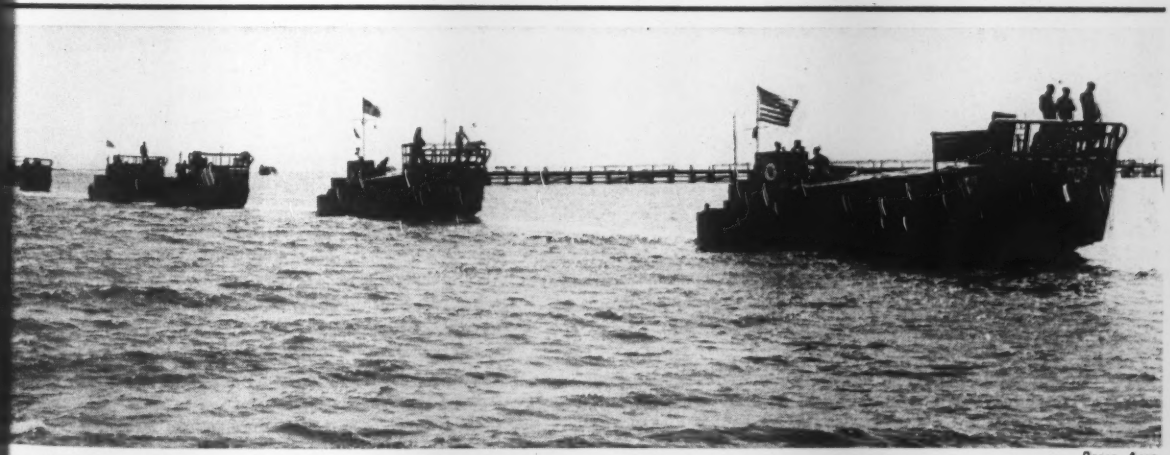
The negro housing units comprise about one-half of 850 units scheduled for erection in the Dundalk, Sparrows Point and southeastern section, which the NHA approved for immediate construction.

In the Brooklyn-Curtis Bay area 950 additional units are to be erected under the NHA-approved program, which also includes 200 additional family accommodations through privately financed conversion of existing units.

• • •

World riveting record beaten on Liberty ships

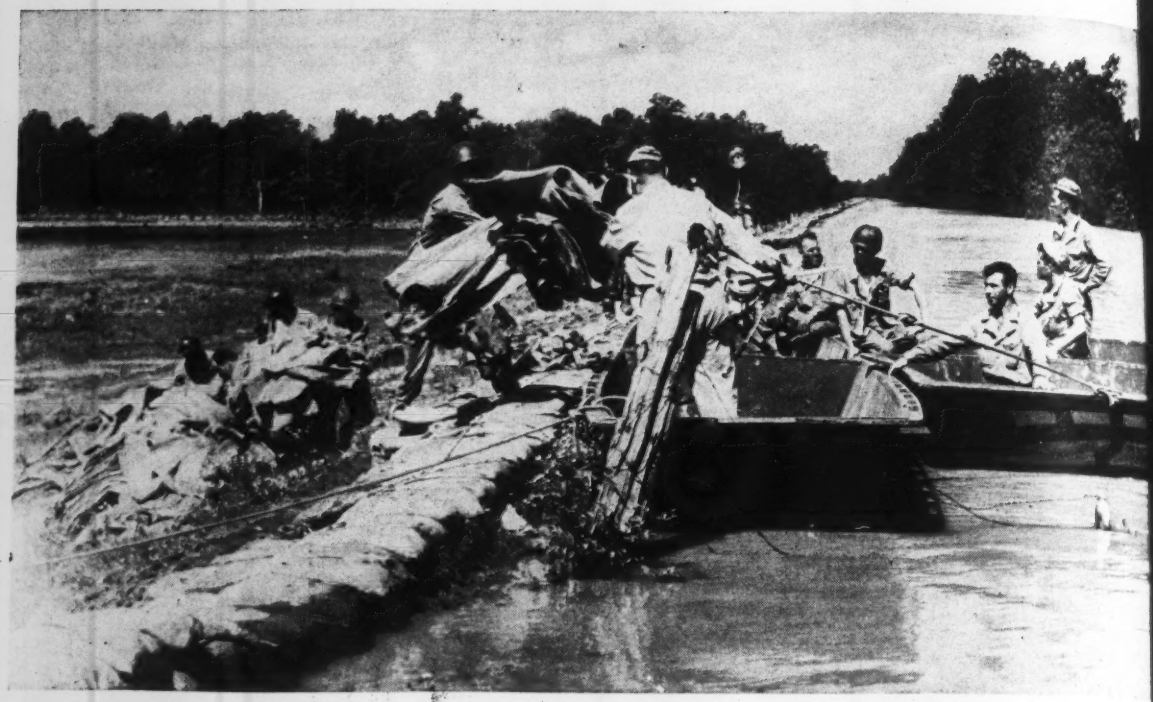
Two 5-man riveting teams, standing on a scaffold, hammered away at Liberty Ship "Billy Mitchell" on May 21. When they finished their 5½ hour trick, the California Shipbuilding Corp. asserted that the first team had driven 2,001 rivets and that each had bettered the world's riveting record. One team averaged 363.8 rivets an hour.



Press Assn.

New landing craft successfully complete long test cruise

of the 35 landing craft and staff boats United States Army Engineer amphibian d are shown entering a military installation near Camp Edwards, Mass., on May 5, upon completion of a 38-day training cruise. A total of 303 officers and enlisted men were in the convoy that made a 2,170-mile journey from Carrabelle, Fla. For experimental purposes the open landing craft were covered.



Troops of the 359th Engineers loading sacks into an army ponton for sandbagging weak points on the White River le

Engineer Troops Tackle Flood Emergency

ENGINEER TROOPS from training camps in the lower Mississippi valley are getting first-hand experience in meeting emergency conditions while helping to check flood damage in Midwest states. Many are helping to raise levees or to strengthen weak points in the levee system, while others using rubber boats, ponton or amphibian jeeps are assisting in rescue work. More specialized work is being carried out by water-supply and bridge-building units.

Amphibian jeeps and rubber boats were used by the army engineers in rescue work.

When high water swept away 27-in. water main which crosses Arkansas by way of the highway b between Van Buren and Fort S Ark., cutting the supply to Fort S Van Buren and to Camp Chaffee. engineers undertook to build a new across the river, carrying it on p bridges across 700 ft. of highway had been washed out and was ru 25-ft. deep in one place. The pla to put a header on the 27-in. li the break, coming off with three lines. The pipe laying troops little difficulty in crossing the s cuts through the highway, but the swift water in the large opening it necessary to use heavy ponton e ment and to anchor the bridge at points. The bridge they built strong enough to carry standard trucks. Work started on May 15, by May 17 four bridges and two 8-in. lines had been completed. Th paired main was flushed out and s ized on the 16th.

Emergency supply

Meanwhile, as the supply in Buren and Camp Chaffee was g low, three engineer water-supply l lions from Camp Gruber, Okla. two from Camp Maxey, Texas, wer

to report to Camp Chaffee. The 2,000-gal. purification units they supplemented the 60,000-gpd. ent already at Chaffee. From the Service Forces Depot at Memphis, 300 miles away, five mobile 0-gal. water-supply units also were to the threatened area.
en the third 8-in. line was com- Fort Smith had a supply of 3,- 0 gallons per day, against a nor- onsumption of 4,500,000 gpd. The ency units sent to Camp Chaffee expected to bring the camp sup- to 650,000 gpd., which with the es was expected to take care of ency needs. Normally, the camp ,500,000 gpd.

Troops patrol the levees

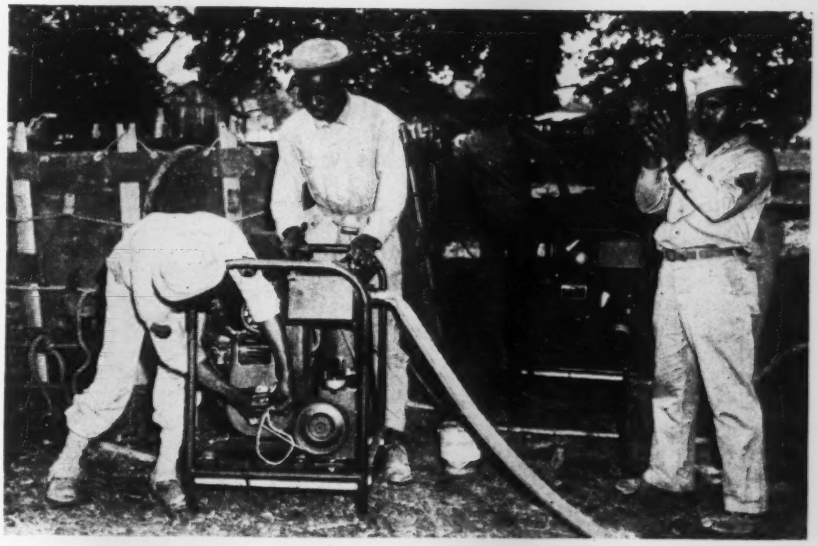
re were 3,500 troops patrolling the sas levees, helping the local fighters on May 17. The 393rd eers, a special service regiment Camp Claiborne, La., was in com- each engineer company having ompanies of infantry from Camp son under its immediate direction. them as liaison officers were engi- from the office of the district en- who are familiar with local levee tion.

Alaska Highway veterans

ong the troops engaged in this gainst floods is the 95th General e Regiment (colored), under the and of Lt. Col. Miles M. Thomp- which did an outstanding job on the southern sector of the Alcan Highway last summer. Hardly back in Camp Claiborne, La., the regiment was ordered to report to Col. Jarvis B. Bain, district engineer, Memphis District, for work on the north bank of the Arkansas. So effectively did they perform on strengthening and raising levees that half were soon released for work on the White River.

Two other general service regiments, the 364th and the 359th, as well as three light ponton engineer companies from Camp Beauregard, La., Camp Swift and Camp Bowie in Texas are on the job. The troops are equipped with standard army earth-moving equipment, sand bags, shovels, scrapers and dump trucks.

These engineer soldiers, said Col. Bain, have worker almost 24 hours at a stretch and are putting more sandbags on levees than anybody dreamed could be put on.



Mobile water purification units are put in action to provide McClelland, Ark. with a safe supply of drinking water. These troops, from the 95th Engineers, veterans of the Alcan Highway, are starting one of the portable filters and checking chlorine residuals in water already treated and stored in a canvas tank.

Photos by U. S. Army Signal Corps

ing at top speed, men from the 359th Engineers, one of the general service regiments being trained at Camp Clai- , La., strengthen a weak point in a White River levee.

Bureau of Yards and Docks abandons cost-plus-a-fixed-fee contracts

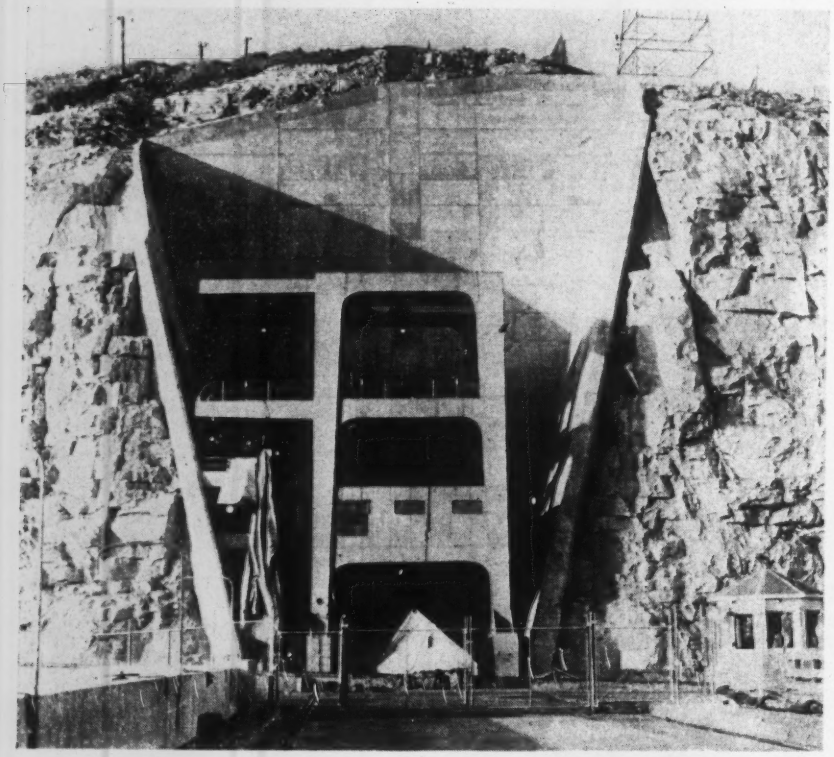
Future work will be handled as fixed-price contracts let by competition. Existing contracts will be converted to a fixed-price basis.

Culminating a gradual development extending over the past year, the Navy's Bureau of Yards and Docks has, for all practical purposes, abandoned the cost-plus-a-fixed-fee type of contract which dominated military and naval construction throughout the early years of the defense program and the war. The bigger fee jobs now underway are being converted to fixed-price contracts, and future jobs will be awarded by informal competitive bidding on an invitation basis.

The new plan, as it affects existing jobs, is to negotiate with the present contractor a fixed-price contract for the remaining portion of the work. This will not be competitive, and outside contractors will get no chance to bid on jobs now under construction. One new factor will be introduced however. It has been the practice in the past, when new work came along at the site of a fee job, to add it on to the fee contract more or less automatically. Thus many jobs which started out moderate in size gradually grew into huge contracts. In future, when further work comes along which goes beyond the scope of a mere change-order, it will be treated as a separate contract and opened to competitive bidding.

On new contracts, competitive bids will be invited from selected lists of contractors. It is hoped to keep the number of bidders on any job to a [illegible] but with many firms now [illegible] work, the lists have a tendency to [illegible] Bidding procedure will be informa[illegible] bonds, for instance, will not be re[illegible] —though any contractor who with[illegible] frivolously is likely to find himse[illegible] cluded from future invitations. Ho[illegible] award will almost always go to th[illegible] bidder, and the bid will be regard[illegible] a price, not as a mere basis for ne[illegible] tion. And performance bonds w[illegible] course be required.

The new policy reflects the ch[illegible] circumstances of naval construct[illegible] the United States (work outside[illegible] United States is handled almost en[illegible] by Seabees rather than contrac[illegible] The biggest jobs and the most [illegible] ones are pretty well finished. The [illegible] now being awarded is generally [illegible] enough for contractors to assume th[illegible] of a firm price. There is time t[illegible] drawings in shape before awarding[illegible] tracts. And with many good contra[illegible] now seeking work there is assurance[illegible] bidders will be found as well as a[illegible] centive to spread the work as mu[illegible] possible.



Bureau of Reclamation Photo

"Open air garage" for big gantry crane

The concrete lined recess in the mountain side above the west end of the Grand Coulee Dam has been a puzzle to the many visitors to the project. This Bureau of Reclamation photograph provides the answer. The big notch in the hill is merely a glorified "open air garage" for a giant traveling gantry crane with a lifting capacity of 150 tons. The large machine moves over the top of the dam on steel rails embedded in the roadway, to manipulate massive coaster gates on the upstream side of the dam. These heavy steel gates control the intake tubes through which the water rushes to the turbines, providing energy necessary to turn the world's largest hydro-electric generators. Shortly, the crane will leave its garage to seat a new gate to be used in the operation of another generator, installation of which is just being completed, and which will add thousands of kilowatts to the present capacity of the Grand Coulee Dam powerhouse.

• • •

Less U. S. construction in March than February

The total volume of construction tivity in the United States amounte $730,584,000 in March, the War duction Board announces. This w percent less than February and 23 cent under the figure of March, [illegible]

The total amount of construction put in place during the first quarte 1943 was $2,318,555,000. The a volume exceeded the forecast by 3 cent. First quarter volume of showed an 8 percent decrease from total peak volume completed during third quarter of 1942. The de from the fourth quarter of last was 28 percent.

• • •

Kaiser's Fontana plant starts making steel

The first steel made on the West C from Western iron ore was tapped Fontana, Calif., on May 14 when open-hearth furnace poured out a li stream of molten metal at Henr Kaiser's integrated iron and steel the first to be put in operation we the Rockies.

Eleven months ago construction o plant was begun on a site 12 miles of San Bernardino. Less than five mo ago the first unit, a 1200-ton blast nace, was put to work making pig Now the first of that iron has been t formed into steel for ships, shells guns.

...nomic development ...nized for N. Y. State

...l of $142,000,000,000 of gross ... output is the aim of the Com... for Economic Development's plan ... at work the millions who will ...eager for peaceful employment ...e war, as well as for those now ... in war production who must be ... back to other jobs eventually. ...rk State is one of the first to ... for this purpose.

...G. Hoffman, president of the ...ker Corp. and chairman of the ...ee's board of directors, has ap... as regional chairman of the ...tee for New York State. James ...Graw, Jr., chairman of the board ...sident of the McGraw-Hill Pub... Co.

...ng attention to the fact that busi...as never before attempted to ...ether on such a scale to attain ...m employment throughout the ... Mr. McGraw said the plan was ...sential supplement to our main ...s of winning the war." The board ...tees, he said, "is convinced that ...icies of government, of business ... labor that interfere with ex... employment should be changed."

...ddition to the appointment of Mr. ...w. Mr. Hoffman also announced ...Willard T. Chevalier, publisher ...iness Week, had been named vice... ...n of the regional group. Other ...irmen for upstate and for New ...City will be appointed later; in ...n some 12 to 14 district chairmen ...be appointed for areas over the

• • •

...op and starts" ... War Production Board

...otal cost of construction projects ... during the week ended May 14 ...3,263,419, the War Production ...has announced.

... brought to $1,349,685,528 the ...ost of all projects halted since ..., 1942, when the War Produc... ...ard began stopping construction ...which did not contribute directly ... winning the war.

...g the week of May 8 to May ...lusive, WPB restored preference ... to projects costing $470,000, ...had previously been halted.

...War Production Board on May 13 ...ed seven Civil Aeronautics Ad... ...tion airport projects which had ...alted January 15. The original ...riations for the airports totaled ...25.

...ll of the airports will be com... ...but sufficient work will go ahead ...e them suitable for emergency ... and servicing fields. The air...ports released from stop orders are located at Willcox, Ariz.; Crushing, Okla.; Bradford-Kane, Pa.; Nogales, Ariz.; Natchez, Miss.; Mason City, Ia.; and Artesia, N. M.

Construction will be resumed on several portions of the Central Valley, Calif., water control project sponsored by the Bureau of Reclamation of the Department of Interior, the War Production Board has announced.

Work has been authorized to the following extent:

1. Completion of Friant Dam by the installation of three valves required for the storage and release of water.

2. Completion of the Madera Canal leading from Friant Dam 38 miles westward to the Chowchilla River area.

3. Continuation of concrete work on Keswick Dam.

These projects, together with other parts of the vast Central Valley development, were halted late in 1942 because of the stringency of critical materials. Remainder of the program, other than these three projects, will continue to be deferred.

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Reduce accident toll

United States Corps of Engineers, while conducting the greatest construction program the world has ever seen, reduced its accident toll in 1942 over 1941 by 66 deaths and 23,252 disabling injuries.

The reduction, according to Major General Reybold, made 604,599 additional man-days available for productive labor and saved $4,457,987 in wages.

Headliners announced for AWWA meeting

J. A. Krug, director of war utilities, Arthur Collins, British municipal expert, and Arthur Gorman, chief of the water branch of the War Production Board, will be featured speakers at the American Water Works Association conference to be held in Cleveland on June 15-18.

Mr. Krug, who occupies a key position in the distribution of all basic raw materials, will tell waterworks men how their activities fit into the overall war situation. He will be followed by Arthur Gorman, who will discuss in detail the policies of the WPB in controlling construction, maintenance and operation of public water supplies.

Mr. Collins, an international expert on municipal finance and administration, will give an account of the war's effect upon utility and municipal finance in England. He has wide experience in arbitrating public and private utility rate cases.

In connection with this meeting the Sanitary Engineering Section of the Office of Civilian Defense will hold a conference of all its regional sanitary engineer officers on June 14-15. The earlier part of this meeting will be closed and will be devoted to the discussion of O.C.D. administrative matters.

The afternoon meeting, Tuesday, June 15, will be open to state water coordinators and state sanitary engineers for a general review of mutual-aid activities as they relate to the field of public water supply.

Steel shortage inspires 200-ft. timber barge design

The urgent need for bottoms and the scarcity of steel plates has greatly stimulated wooden ship construction and barges of timber construction designed like a ship are being built at many yards. The barge shown in this sectional view, from Hodgson-Greene-Halderman shipyard, Long Beach, Calif., has an overall length of 190 ft., a beam of 33 ft. and a capacity of 750 tons. Similar barges exceeding 200 ft. in length are being planned.

MEN AT WORK

Although busy revising his book "Water Supply and Treatment," C. P. HOOVER, chief chemist, at Columbus, Ohio, took time out to describe the experimental work of his department in lining old metal water tanks with cement mortar.

J. G. DOYLE lays out grades for 2,000 houses on FPHA development for W. S. Bellows Construction Co. at Orange, Texas.

Two men recently engaged on timber bridge construction over the Ohio River near Pittsburgh are: Left to right, J. R. JOHNSTON, gen. supt. The John F. Casey Co., and McErady Const. Co. Associates, and R. J. MUNCH, office engineer and gen. mgr. for the organization.

How to get materials, manpower and equipment repairs are a few of the worries of T. C. FRAME, chief engineer of the Pennsylvania Department of Highways. Mr. Frame reports that because of these problems, Pennsylvania is not planning a big construction program this year.

Taking time out from work made difficult by war, H. H. KRANZ, city engineer at Cincinnati, Ohio, tells an ENR editor of successful training walls built of woven wire fencing.

W. B. (BILL) ALLEN is assistant chief engineer for the Tennessee Valley A... This month TVA celebrated it's 10th ann... with 23 operating plants contributing for the war effort.

LEWIS DUNCAN is field superintend... 2,000 houses being built at Orange, Te... W. S. Bellows Construction Co. for the

Prominent in municipal engineering ac... Cleveland are: JOHN C. WENRICK ... who has been city engineer since 19... with the city for 12 years, and ROBT. ... MAN, now consulting engineer for the ... has been with the municipality since 19...

...t on flood
...ix states

(Continued from page 2)

...d Terre Haute, as well as scores ...er towns. Railroad service has ...ippled, and miles of highways ...en put out of service. Several ... bridges over the Wabash be... Illinois and Indiana are threat... are still standing. All streams ... territory are now falling, so ...rs that the worst is over. Steady ... the past weeks have given way ...rmittent showers, reducing the ...nto the streams.

...nnes, Ind., was in danger as the ... rose higher and higher, but ... saved by a levee break on the ... side of the river. This break ... the danger to Lawrenceville, Ill., ... was immediately rushed to that

Ohio and Mississippi safe

...rouble is expected on the main ...f the Ohio and the Mississippi ...Cairo, as the tributary floods are ...into the main rivers when they ...low stages. Local flood-control ... built since the disastrous flood ... on the Ohio will protect im... cities like Paducah far beyond ...ges expected from the outflow ...Wabash. The Jadwin-plan levees ...Mississippi and the New Madrid ...y on that stream below Cairo ... will handle with ease the maxi... ...ests coming down both the Ohio ...ssissippi. In fact, in all prob... the floodway will not go into

...per operation of the flood-con... ...cilities at Pensacola Dam is ... by the chambers of commerce ... Rock, Ark., and Tulsa, Okla., ...munications to their Congress... ...It is charged that the reservoir ...en filled to El. 745, 10 ft. above ...roved power-storage level, which ...y 10 ft. for flood storage. Be... ...f increased power demands from ...dustries, federal authorities had ...ed raising the pool level to El. ... as roads crossing the reservoir ... yet been raised to above the ... four feet of water from the ... was dumped into the swollen ... keep from flooding the high... Douglas G. Wright, manager for ...nd River Dam Authority, states ... flood could not have been ...d had the reservoir been empty.

Latest reports

...reports Tuesday morning from ...strict and division engineers in... ...at the floods are receding on all ...except lower Arkansas and White ...sas and the Wabash in Indiana. ... in the middle Arkansas basin is greater than first reported. Water supplies at Muskogee, Gore and Weber Falls, Okla., failed and have had to be replaced with emergency supplies made safe with army chlorinators. The Arkansas and White rivers now are in a second rise in two weeks, and new crests are moving downstream against levees already soaked by earlier flood.

The crest on the Mississippi passed St. Louis Tuesday morning at 39.0 stage, highest in 99 years. The Illinois Riv r is falling at Peoria and Beardstown, both cities now being considered safe. The Caterpillar Tractor Co. plant was saved by 17,000 employees working on the East Peoria District levees. Vincennes, Ind., is partly flooded from Wabash backwater, but the main levees are holding.

Except for one isolated case below St. Louis, not one levee built by the Army Engineers under flood control acts passed since 1929 have failed.

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More lake diversion requested by Chicago

An appeal for help in eliminating a dangerous sewage situation caused by increased pollution of Chicago's south side water supply has been made direct to President Roosevelt by Mayor Edward J. Kelly of Chicago. Construction of a filtration plant to serve the endangered area has been interrupted repeatedly by a shortage of critical materials and it is feared that polluted water occasionally backed up in Calumet River and discharged into Lake Michigan near the water intake will create a real menace to public health.

Calumet River normally diverts 1,500 cfs. of water out of Lake Michigan, through the Calumet Sag Channel into the Chicago Sanitary Canal and on down to the Illinois River. However, the present amount of diversion is insufficient to prevent the Calumet River backing up under heavy rains and discharging into Lake Michigan. To alleviate this unhealthful condition the City of Chicago is seeking permission to increase the diversion of Lake Michigan water to 5,000 cfs., thereby insuring a continual positive flow away from the city's water intake.

A power plant at Lockport, Ill., has ample capacity to convert the additional water diverted from Lake Michigan into electric power.

Is it worth $275,000 to protect property valued at $350,000? That is what property owners of Seattle's North Capital Hill section, which is subject to earth slides, will have to decide. The municipal board of public works estimated it would cost that much to provide the necessary drainage to stop the slides.

New York contractors sponsor army dinner

To aid the Corps of Engineers, U. S. Army, in its plan to recruit 9,000 construction men in a month for general service and special service regiments (*ENR* April 15, p. 519) the contracting and building organizations of New York City are sponsoring a dinner to be held at the Commodore Hotel on the night of June 3, at which Major General Eugene Reybold, Chief of Engineers, U. S. Army, will be the principal speaker.

The associations organizing the dinner meeting are the New York division of the Associated Equipment Distributors, Building Trades Employers Association, General Contractors' Association of New York, Metropolitan Builders Association, New York Building Congress, and the Public Building Contractors' Association of New York.

The dinner committee is headed by John P. H. Perry of the Turner Construction Co. Other members are Webster J. Caye, Fred Driscoll, James W. Escher, Philip H. Grove, John Lowry, Wm. P. McDonald, H. O. Penn, and Percy Vermilya.

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Protecting Long Island Sound from pollution

Hearings were held May 10 at Stamford and South Norwalk, Conn., by the Interstate Sanitation Commission of New York, New Jersey and Connecticut, regarding the uses to be made of the waters of Long Island Sound bordering Fairfield County, Connecticut.

Acting under a three-state compact approved by Congress, the Interstate Commission has jurisdiction over pollution of the sound westward from New Haven, along the Hudson River to a point north of Bear Mountain Bridge, and all of lower New York Bay and neighboring New Jersey waterways.

From testimony taken on May 10, the commission will determine the character of sewage disposal methods to be employed by municipalities along the Sound.

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Second airport for Denver

City officials of Denver, Colo., have announced plans to acquire and develop 2,000 acres of meadowland 5 miles south of the city in Arapahoe County for a second municipal airport.

According to the officials, a second air depot for the city will relieve congestion in the vicinity of the municipal airport caused by increasingly heavy war and civilian air traffic; provide the city with an excellent field for small planes and provide a field for war, commercial and civilian planes in case of emergency.

JOBS OF THE WEEK

TEMPORARY BUILDINGS, Nebraska

C. C. Larsen & Sons, Council Bluffs, Ia., have been awarded contract for temporary buildings, in Fillmore County by U. S. Engineers, Omaha, Neb. Estimated cost is between $500,000 and $1,000,000.

WARDS AND CONNECTING CORRIDORS, St. Albans, N. Y.

Bureau of Yards & Docks, Navy Dept., Washington, D. C., has awarded contract for wards and connecting corridors at Naval Hospital to Iglehart, Caldwell & Scott, Inc., New York, N. Y. Estimated cost is $1,442,229.

HOUSING, Texas

Houston Housing Authority, Houston, has awarded contract to Knutson Construction Co., Houston, at $1,053,711. The project is San Felipe Courts Housing. Salisbury, Maddox, Werlin, Kiefner & Finger, Associated, 2017 West Gray St., Houston, are the architects.

HOUSING, California

Louis C. Dunn, San Francisco, Calif., has been awarded the contract for dwelling units, maintenance building, cafeteria and commercial center, by Housing Authority of City and County of San Francisco, San Francisco. The estimated cost is $2,380,242, for NHA. Eldred T. Spencer, and William C. Ambrose, San Francisco, are the architects.

HOUSING, Connecticut

Public Housing Authority, Boston, Mass., awarded contract housing, Conn 6041-42 to City Construction Co., Bridgeport, Conn., $507,650. Elbert Richmond, Waterbury, Conn., is architect. W. J. Carson, West Hartford, is engineer.

ROADS, Pennsylvania

State Highway Department, Harrisburg, received lowest bid on 7,328 ft. Legislative Route, Eddystone Boro, Ridley and Tinicum Townships, from Cayuga Construction Co., New York, N. Y. The estimated cost is $1,016,602.

BUILDING, Illinois

U. S. Engineers, Chicago, Ill., awarded contract buildings, outside utilities, roads, sidewalks and landscaping, to A. Farnell Blair, Decatur, Ga. Estimated cost is between $1,000,000 and $5,000,000.

HOUSING, California

William C. Crowell Co., Pasadena, will construct dwelling units, for San Bernardino County Housing Authority, San Bernadino, which opened bids for NHA. Estimated cost is $631,900. J. Dewey Harnish, Ontario, and Matcham Heitschmidt, Los Angeles, are associated architects.

HOUSING, California

Public Housing Authority, San Diego, will build housing project, to cost estimated $1,067,800. William C. Crowell Co., Pasadena, has been awarded contract. Wurdeman & Beckett, Los Angeles and H. L. Bodmer, San Diego, are associated architects.

PLANT, Sydney, N. S.

Dominion Steel & Coal Corp., Sydney, N. S., awarded contract on ore beneficiation plant to Arthur G. McKee & Co., Cleveland, O.; and a seven hundred ton mixer plant to Canadian Bridge Co., Ltd., Montreal, Que. Estimated cost, $1,993,500.

BUILDING, California

Jackson Brothers—LeSage, Los Angeles, Calif., was lowest bidder when U. S. Engineers, Los Angeles, Calif., opened bids May 21. Cost is less than $1,000,000.

FACTORY BUILDINGS, Indiana

National Concrete Fireproofing Co., Cleveland, O., has been awarded contract for seven factory buildings by Republic Aviation Co., Evansville. Estimated cost is $1,125,000. Marr & Holmes, Evansville, Ind., are architects and engineers.

HOUSING, Michigan

Spence Brothers, Saginaw, Mich., was lowest bidder for housing when Public Housing Authority, Cleveland, O., opened bids. Low bid on Specification A was $649,600 and on B $686,000. Harley and Ellington and C. E. Day, Detroit, Mich., are architects.

RUNWAYS AND TAXIWAYS, Pensacola, Fla.

C. C. Moore Construction Co., Panama City, Fla., has been awarded a contract for runways and taxiways at Naval Air Training Center, at $514,611, by Bureau of Yards & Docks, Navy Dept., Washington, D. C.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 14.

Yukon telephone line opened for business

On May 21, a 1,580-mile te line was officially opened to Wh Yukon Territory. The line, whic lels the new Alcan Highway for its length, is exclusively for milit

Congratulatory exchanges bet outpost and army authorities a ington marked the occasion of t ing of the line, the building o was supervised by Maj. T. F. Lt. Col. Dee Berry, signal office command, said that no telepho ever had reached the far n stretched for any comparable across uninhabited wilderness. T is to be continued on toward Fa Alaska, 600 miles to the north

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Concrete barge for launched on East coa

First concrete vessel of lar launched on the East coast since War I went into the Savannah R Port Wentworth, Ga., as a cl Maritime Day, May 22. Classe barge because it is not self pr *Concrete No. 6*, is a ship shap 366-ft. long 11,000 ton displacem sel for carrying a cargo of 5,500 l of oil.

The vessel was built by the M Shipbuilding Corp. in a yard near nah, Ga., where five other bar under construction and a total under contract.

An article describing construc this yard will appear in the June 1

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U. S. now has all plan and machine tools ne

The War Production Board h nounced that the United States n all the plants and machine tools needs for war production.

This does not mean that the S 000,000 worth of war plants sc to be completed next month will n tribute to the war effort.

It is said, however, that appar further program calling for the ex ture of between $4,000,000,00 $5,500,000,000 on war plants will examined, with the burden of pro now on falling upon those who c that such and such a particular p needed.

Authorities say that while we h plant and tools to turn out enorm quirements in munitions, the pos of plant and tools does not les necessity for turning out muni the greatest possible volume in th est possible time.

Roland Carr joins News-Record staff

Roland Carr, bridge designer and tural engineer, has joined the edi- l staff of *Engineering News-Record* ssistant editor, assigned to the west- district at Chicago. Mr. Carr, a na- of Kansas and graduate of the Uni- ty of Kansas in civil engineering, t the first three years out of college e bridge design office of the Ken- y State Highway department and next two with the American Bridge pany at Gary, Ind. Then for the 11 years, from 1930 to 1942 he was ciated with the Wyoming State High- department as assistant bridge en- er. For the past year he has been the structural department of the rican Bridge Company.

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Urban redevelopment planned in Wisconsin

efore the Wisconsin state legislature n urban redevelopment bill which grant tax concessions in the recla- on of municipal slum areas. Accord- to City Attorney Walter J. Mattison, Milwaukee, who helped draft the sure, municipalities will be author- to grant private redevelopers of ted areas a 10-year exemption from increase in assessment.

swering the objection that such tax ptions might be unfair to other tax- rs, Mr. Mattison says that "The bilitation of blighted areas in and downtown Milwaukee would even- y add millions of dollars to the tax but to leave those areas as they are d in time completely choke the most able portion of the city and would t in increasing taxes on every home e city."

Nate Biederman, president of Midwest Construction & Asphalt Co., Chicago, Ill., has resigned that position to accept a commission as lieutenant commander in the Seabees, the Navy construction battalion.

L. W. Coles has been promoted from assistant chief engineer to acting chief engineer in the department of public works of Newark, N. J. Mr. Coles will fill the duties of the late Chief Engineer James W. Costello.

Ian Morgan, county engineer for Travis County, Texas, has been commissioned a lieutenant in the Navy. Mr. Morgan, whose home is in Austin, has been granted a leave of absence from his post by the county commissioners.

R. H. Maddux has assumed the position of assistant engineer of road design for the Texas state highway department. Mr. Maddux succeeds H. G. Bossy who relinquished that position to be available for technical matters in connection with postwar planning, particularly in the development of trafficways into and through metropolitan areas.

James McCee Smith, Raleigh, N. C., civil engineer, has been commissioned an ensign in the Naval Reserve and is now in training with the Seabees at Williamsburg, Va.

J. W. Huffman, who was formerly connected with the U. S. Engineers of the Vicksburg, Miss., and the St. Louis, Mo., districts, and who has been superintendent of production stores at the Oak Ordnance Plant, Illiopolis, Ill., has been appointed lieutenant in the United States Naval Reserve.

Walter Rautenstrauch, distinguished engineer, educator, author and speaker, has been appointed visiting professor of engineering at North Carolina State College, Raleigh, N. C. for the spring term. He is on leave from Columbia University where he is head of the department of industrial engineering.

The Memphis, Tenn., City Commission has voted to change the title of building commissioner to chief building inspector. **Charles K. Chandler** has been appointed to fill the new position. Mr. Chandler in 1928 was senior highway inspector for the Tennessee Highway Department and later a partner with his father in the firm of Chandler & Chandler, contractors.

George Stiers, Oklahoma City, Okla., engineer in charge of construction for the Amis Construction Co., has been commissioned a lieutenant, jg, in the United States Naval Reserve and has been assigned to the construction battalions at Camp Peary, Williamsburg, Va.

D. D. Forgey has been appointed district engineer of the Washington State Highway Department for the Wenatchee district, succeeding **John Duff,** who resigned after 14 years. Mr. Forgey had previously been construction engineer in the Spokane district office of the department.

F. E. Caspar, senior civil engineer of the city of Orange, N. J., for the past 17 years, has been named city engineer to replace **Kenneth F. Crane,** deceased. Mr. Crane died Feb. 3, 1943, bringing to a close 29 years of service with the city of Orange.

Lt. Col. David W. Heiman, Philadelphia, Pa., has been assigned to Camp Butner, N. C., as commanding officer of the 52nd Engineer Combat Regiment. Colonel Heiman graduated from the United States Military Academy at West Point in 1928 and later did post graduate work in engineering at the University of California.

B. R. Kulp, chief engineer of the Chicago & North Western Railway Co., **A. R. Harris,** assistant engineer of bridges, and **F. W. Hillman,** assistant engineer of maintenance, have had their respective jurisdictions extended over the Chicago, St. Paul, Minneapolis and Omaha Railway, a subsidiary of the Northwestern Line. **F. C. Huffman,** assistant chief engineer of the Chicago & Northwestern Railway, was retired April 1 after many years of service with the company.

Fred E. Buck has been reappointed to a four year term as state engineer of Montana.

William F. Guyton, assistant hydraulic engineer with the United States Department of the Interior Geological Survey, has recently moved from Lufkin, Tex., to Austin, Tex., to continue his work with the ground water division of the Geological Survey in investigating the quantity and quality of the underground water resources of Texas.

George Henningsen, Anamosa, Ia., Jones County engineer, is returning to Marshalltown, Ia., as Marshall County engineer. He is being succeeded in the Jones County position by **Mike Rubek,** former assistant county engineer, who has been working with the Howard R. Green Co. on war contracts.

WASHINGTON HIGHLIGHTS

Construction contractors who, now that contracts are getting scarce, are trying to keep themselves busy with contracts for repair and maintenance of industrial plants, will find this easier to do as a result of amendments made this week to WPB's CMP Regulation 5. This is the regulation governing distribution of materials for repair and maintenance use. As amended, it permits persons doing maintenance work for someone else to use the same priority rating to which that person would be entitled if he were doing it himself. Previously, if a contractor were doing maintenance work for a manufacturer, the latter would have to buy the materials to get priority benefits; now the contractor can handle the entire matter. As an alternate, the contractor may prefer to apply, on form CMP-3B, for a rating and allotment number on materials.

A good many contractors are showing interest in specialized maintenance work as a means of keeping their organizations together through the lean days ahead. The idea has received some favor in Washington as a means of conserving manpower, on the theory that a few men specializing in maintenance can look after several plants as readily as more men split up among the various plants. One difficulty is fear of objections on the part of unions in the plants, especially since production workers, by and large, are of CIO while construction workers are members of the AFL.

Engineering firms are permitted, by another change in Regulation 5, to buy tracing paper, reproduction paper, sensitized paper, graph paper, and chemically treated paper under the simple maintenance and repair procedure.

College training of civilian engineers at federal expense, along the lines of the Army and Navy college training programs, is being considered again. Abandoned some weeks ago after having been discussed in the War Manpower Commission for months, it is now being pressed upon Congress again by the commission.

OPA is considering the imposition of a dollars-and-cents price ceiling on sewage sludge.

Drastically reduced budget estimates for the Bureau of Reclamation were still further cut when the House last week passed an Interior Department appropriation providing $15,118,000 for reclamation as compared with $89,000,000 for the current year. Actually, it was WPB which made the cuts, since the $5,636,000 reduction below budget estimates results from WPB stop-orders on reclamation projects. The committee strongly recommended that, to aid in overcoming a food shortage, these stop-orders be revoked. Of the money appropriated, $11,500,000 is for continuation of work at Shasta Dam, including installation of two 75,000-kva generators newly approved by WPB.

The Senate Appropriations Committee has taken action to keep the National Resources Planning Board alive, but on a highly restricted basis. At the same time it acted to permit the Home Owners Loan Corporation to be liquidated gradually, instead of during the coming fiscal year. The committee has allotted to the National Resources Planning Board, headed by Frederick A. Delano, President Roosevelt's uncle, $200,000 of the $1,400,000 which the Budget Bureau had recommended.

First of the new "area representatives" who are to coordinate the activities of all the federal agencies operating in congested areas is Russell S. Hummel. Appointed by the President's Committee for Congested Production Areas, Hummel will coordinate federal activities relating to local facilities and services in the Hampton Roads area and will also work with local government agencies. For th epast eight years, Mr. Hummel, who is a civil engineer, has been assistant state director and director of WPA in Virginia.

Imposition of state unemployment insurance taxes on employers of maritime workers such as dredge crews was upheld this week by the U. S. Supreme Court.

War housing of the temporary substandard type built recently should be torn down as quickly as possible after the war in order to avoid having the federal government create the slums of ten years from now. Commissioner Herbert Emmerich of the Federal Public Housing Authority said last week. Where warworkers start leaving soon after the end of the war, this can be done at once, he said, but in other cases alternate housing will have to be provided. As to the more substantial houses and the demountable houses built in the early days of the war housing program, workers living in them should be given a first option to buy them, he said, either individually or under some group ownership plan. In some cases it may be possible to sell such houses to local housing authorities for low-rent housing. In no case should they be dumped on the market to depress real estate values.

Competition keen for construction contract

Intense competition among co
tors was apparent at Chicago's mi
dollar letting May 12, for constru
of two additional units to its 320
filtration plant being built on
Michigan shore at 79th St. The in
of bidders in this letting was show
63 requests having been made fo
proposals.

Work to be done at this time inc
construction of a reinforced co
superstructure for a chemical bui
and construction of a low-lift pum
station in which steel framework is
in place, requiring only the additio
masonry walls and concrete floors.
critical materials are involved in
contract; the principal items being
crete, reinforcing steel and mas
Provision will be made for insta
heating, ventilating, plumbing and
trical fixtures, but the installatio
plant operating machinery and e
ment is not included at this time.

Of the 14 bids submitted, S. N.
son Co., Chicago, was low with a bi
$954,771. Other low bidders, all of
cago, were: Joseph J. Duffey Co., $
165; Patrick Warren Construction
$968,000; and Paschen Contrac
$984,762.

Construction was first started in
on this $21,000,000 filtration plant w
will serve Chicago's south side dis
(ENR June 18, 1942, p. 995). About
000,000 have been spent to date o
construction, of which 45 percent
PWA money.

The filtration plant now is 55 per
complete, according to W. W. De
ard, city engineer, and when finis
its 80 filters with a daily capacit
320,000,000 gal. will provide one-t
the entire water supply of Chicago,
ing the south and south-west side.
project is the first filtration plant in
history of Chicago, water for all
tions of the city now being purified
chemical treatment.

Following, so far as possible, with
WPB's plea for the use of substi
for critical materials, reinforced
crete replaces steel in the chem
building framework, concrete pipe
used instead of cast iron pipe,
wood replaces steel for window fra
and stairways.

Chicago's need for a filtration pl
that will substantially reduce the a
tion of chemicals has long been
ognized, said Oscar Hewitt, com
sioner of public works, and that nee
now aggravated by the increased
tivity of the south side steel indus
which pour more and more waste
the southern tip of Lake Michigan
a short distance from the south
present intake.

OBITUARY

. Taylor, 63, member of the Pub- ities Commission of Connecticut 931 to 1941, died at Camden, on May 17. He was graduated a gineer at Yale University in 1904. veral years as an instructor there, ered the engineering department New York, New Haven & Hartford d. In 1930 he retired as assistant ecutive vice president. In the first War he served as a first lieutenant Engineer Corps.

H. Henderson, 76, general con- who built most of the houses in y, N. B., died there May 11. been in construction work for rs.

ck Myer Scott, 35, of Greensboro, died recently. Associated with a boro contracting firm, Mr. Scott had been working on a con- on project at the Marine Base at Point, N. C., and formerly was tendent of streets at New Bern,

. Eskridge, 52, civil engineer of Bluff, Ark., died April 11. He was ed by the Leach Construction Co.

ron Leader Charles Hindmarsh 49, assistant chief works officer ed to No. 1 Training Command, o, of the Royal Canadian Air died at his home there May 14. ron Leader Bell had practiced as engineer in India, at Red Sea nd in Bermuda.

George, 69, chief engineer of the eville, Ark., water plant for 35 died there May 11.

L. Guthrie, 57, superintendent of at Morehead City, N. C., died 7.

nd R. Halsey, 71, who for more 0 years served as engineer for sev- ssex County, N. J., municipalities, t Maplewood, N. J., May 20. Mr. was at various times engineer for llage of South Orange and for the of Irvington, Maplewood and Mill- He gave up municipal work ten go but continued in civil engineer- Newark until five years ago. He specialized in the construction of sanitary systems, and did a great deal of work along that line.

Fremont R. Crabtree, 79, who is said to have pioneered the use of reinforced concrete for dwellings, died May 4 in Milwaukee, Wis.

Richard Allen Jobes, 42, senior engineer in the Bureau of Yards and Docks of the Navy Department, died at Washington May 4. Mr. Jobes went to Washington in 1935 to enter the employ of the Resettlement Administration and later transferred to the Agriculture Department, which he left to go with the Navy Department. He was a former vice president of the District chapter of the National Society of Professional Engineers.

Maurice F. Brown, 70, of Winchester, Mass., a consulting structural engineer of Boston, died May. 22 Mr. Brown graduated from Dartmouth in 1897, and received the degree of civil engineer from the Thayer School of Civil Engineering the following year. He entered the employ of the Boston Bridge Works in 1898 and three years later became chief engineer, a position he held until 1928 when he engaged in private practice.

CONTRACTS AND CAPITAL

CIVIL ENGINEERING construction volume for the week in continental U. S. totals $46,465,000. This volume, not including the construction by military combat engineers, American contracts outside the country, and shipbuilding, is 27 percent lower than a week ago, and 72 percent below the total reported for the corresponding week last year.

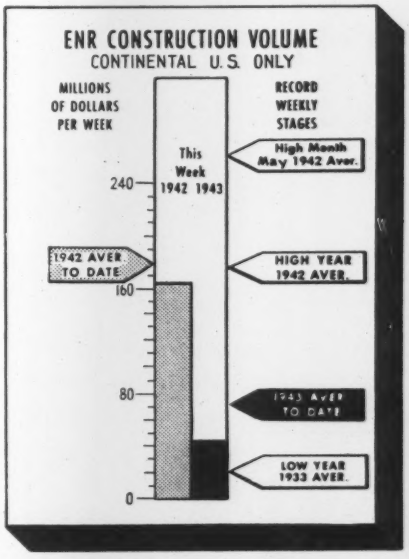
Private construction is 64 percent lower than in the preceding week, and 33 percent below a year ago. Public work declines 20 percent from a week ago, and is down 73 percent compared with the 1942 week.

The current week's construction brings 1943 volume to $1,491,759,000, an average of $71,036,000 for each of the 21 weeks of the year. On the weekly average basis, 1943 volume is 60 percent lower than the $3,936,356,000 reported for the 22-week period last year. Private construction, $149,766,000, is down 48 percent compared with last year, and public construction, $1,341,993,000, is 61 percent lower when adjusted for the difference in the number of weeks.

In the classified construction groups, gains over the preceding week are in bridges and highways. The latter is the only class of work to gain over last year.

New capital for construction purposes for the week totals $2,673,000. It is made up of $1,423,000 in state and municipal bond sales, $750,000 in corporate security issues, and $500,000 in RFC loans for public improvements.

New construction financing for the 21 weeks of 1943 totals $492,422,000 and compares with $6,818,823,000 reported for the 22-week period in 1942.



Continental U. S. only—construction by military combat engineers, American contracts outside U. S., and shipbuilding not included.

CONTRACTS

Continental U. S. Only
(Thousands of dollars)

	Week Ending May 28 1942	May 20 1943	May 27 1943
Federal	$145,433	$49,558	$36,371
State & Municipal	12,336	4,162	6,440
Total public	$157,769	$53,720	$42,811
Total private	5,458	10,209	3,654
TOTAL	$163,227	$63,929	$46,465
Cumulative 1943 (21 weeks)			$1,491,759
Cumulative 1942 (22 weeks)			$3,936,356

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1942 22 weeks	1943 21 weeks
NON-FEDERAL	$279,868	$92,072
Corp Securities	90,416	3,571
State & Mun.	142,039	76,368
R.F.C. loans	47,413	9,000
FPHA loans	.....	3,133
FEDERAL	$6,538,955	$400,350
TOTAL CAPITAL	$6,818,823	$492,422

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost	May '43	289.87	139.34
Building Cost	May '43	227.64	123.06
Volume	Apr. '43	225	99

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, Manager *SCOTT McLEOD, Statistician*
(Daily service also available—Write for details)

Location of ENR Correspondents

Symbols and Abbreviations Include:

- † Federal Government
- ★ Project of $500,000 or over
- **ENR** Engineering News-Record
- **CD** Engineering News-Record Construction Daily
- **A-E-M** Architect—Engineer-Management type of contract.

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply — Unclassified
Sewers, Waste Disposal — Latin America
Bridges, Grade Cross'gs — Public Buildings
Streets & Roads — Commercial Buildings
Earthwork, Waterways — Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads): BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR); LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Note: To comply with censorship requirements, addresses on some reports are being generalized. Data which would reveal the purpose of the improvements and the size are withheld. The name of contractor and general area are reported.

WATER SUPPLY

PROPOSED WORK

★**Md., Baltimore**—City, water sys. imprvs., incl. new pumped supply from Patapasco River and expansion distr. sys. $12,500,000. Bond issue approved.

†**Md., Towson**—Comrs. Baltimore Co., Courthouse, Towson, bids soon, 1 story, brick pump. sta. at Lodge Forest. **FWA.** R. T. Register, Baltimore Life Bldg., Baltimore, engr.

†**Tex., Bastrop**—City, WW. sewers. Revised project $296,150. **FWA.** Garrett Eng. Co., 3504 Audubon St., Houston, engrs.

Tex., Port Neches—J. O. Herring, mayor, WW imprvs. and expansion, $78,000. J. B. Converse & Co., Inc., City Hall Annex, Port Arthur, engr CD 4/5—ENR 4/8.

N. S., Amherst—Municipality, watermains sys. exten. $17,000.

N. S., Halifax—Laying new main, installing pump, equipment to improve water supply on Isleville St. and nearby. Engineering Services, Ltd., c/o P. Utilities Bd., archts.

N. S., Yarmouth—Filtration plant at Lake Milo, $100,000. I. P. MacNab, Bd. P. Utilities, engr. CD 4/21—ENR 4/29.

N. S., Yarmouth—Municipality will not construct pipeline from Lake George. Project abandoned. CD 6/19/42—ENR 7/2/42.

Ont., Belleville—Gore & Storrie, engrs., 1130 Bay St., Toronto, bids soon reservoir, water pump. sta. and installing some equip., for City. About $36,000.

Ont., Whitby—Municipality, c/o J. R. Frost, clk., reconstructing water tower, sidewalks, imprv. harbor. $40,000.

BIDS ASKED

Bids Asked June 1

N. Y., Brooklyn—Comr. Water Supply, Gas & Electricity, Municipal Bldg., New York, hauling, laying watermains, appurtenances, Columbia St. Plans deposit $1.

Bids Asked June 2

Wis., Plymouth—Plymouth Electric & Water Utilities, T. M. McGuire, mgr., Plymouth, 8 and 12 in. water transmission line. Foth & Boyd, 225 Columbus Bldg., Green Bay, engrs.

Bids Asked June 3

N. Y., Brooklyn—Comr. Water Supply, Gas & Electricity, Municipal Bldg., New York, hauling, laying watermains, appurtenances in rights of way located in area bounded by Voorhies Ave., Avenue Z, Bragg and Ford Sts. Plans deposit $1.

Bids Asked June 4

N. Y., St. George—Comrs. Water Supply, Gas & Electricity, Municipal Bldg., New York, hauling, laying watermains, appurtenances in Kemball and South Greenleaf Aves. and Florida Ter. Plans deposit $1.

LOW BIDDERS

Md., Elkton—Town, 112 North St., May 19, filter plant alterations, addns., raw water intake, chemical house, filter unit, etc., from The Thompson Co., 4615 Hazel St., Phila., Pa., **$28,878.** CD 5/17.

CONTRACTS AWARDED

†**California**—U. S. Eng., 751 S. Figueroa St., Los Angeles, water supply sys., Contr. 509-Eng-4419, Ventura Co., to J. S. Barrett Co., Santa Ana, under **$50,000.**

†**Florida**—U. S. Eng., 575 Riverside Ave., Jacksonville, addnl. water and sewerage sys., Neg-Jax-43-859, Dixie Co., to Chas. K. McKaskill, Perry, under **$50,000.** Awarded 5/13.

†**Florida**—U. S. Eng., 575 Riverside Ave., Jacksonville, water supply, sewage treatment plant, Neg-Jax-43-873, Lee Co., to R. E. Clarson, Inc., 101-5 St. S., St. Petersburg, under **$100,000.** Awarded 5/15.

†**Florida**—U. S. Eng., 575 Riverside Ave., Jacksonville, water and sewerage sys., Orange Co., to Ryan Constr. Co., 416 Tampa St., Tampa, under **$50,000.** Awarded 5/13.

†**Missouri**—U. S. Eng., 10 E. 17 St., Kansas City, Mo., water supply sys., Buchanan Co., to Layne-Western Co., 1010 W. 39 St., Kansas City, Mo. Est. under **$50,000.**

†**Missouri**—U. S. Eng., 10 E. 17 St., Kansas City, Mo., watermains, Phelps Co., to Clark Const. Co., Osage Beach, under **$50,000.**

†**Ohio**—U. S. Eng., 925 New Federal Bldg., Pittsburgh, Pa., c. i. watermain for site imprvs. at bldg., Cuyahoga Co., to Curro Constr. Co., Union Commerce Bldg., Cleveland, **$50,000-$100,000.**

†**Rhode Island**—U. S. Eng., 819 Industrial Trust Bldg., Providence, submarine watermain for water sys. Newport Co., to Elliott & Watrous, Crest Ave., Riverside. Est. under **$50,000.**

†**Texas**—U. S. Eng., Fort Sam Houston, drilling, facilities for water supply well, Bastrop Co., to L. Fikes, Gulf States Bldg., Dallas, under **$50,000.**

†**Texas**—U. S. Eng., Fort Sam Houston, addnl. facilities, water, gas, sewer lines extens., conversion of bldg., etc., Bexar Co., to E. W. Oeffinger, P. O. Box 1208, San Antonio, under **$50,000.**

†**Texas**—U. S. Eng., Fort Sam Houston, drilling addnl. water supply wells, Coryell Co., to Layne-Texas Co., 6931 Harrisburg St., Houston, under **$50,000.**

†**Washington**—U. S. Eng., 800 3 Ave., Seattle, water supply line, Grant Co., to McAtee & Heath, E. 3527 Trent St., Spokane, under **$50,000.**

Ont., Hagersville—Dpt. Transport, Ottawa, water supply mains and WW booster pump. station, S. F. T. School, to Scott-Jackson Constr. Co., Ltd. New Toronto, about **$27,000.** Bids 4/7. CD 3/31.

SEWERS, WASTE DISPOSA

PROPOSED WORK

Conn., Derby—Dpt. P. Wks., City Ha... age disposal plant.

†**La., New Orleans**—City, Sewera... Water Bd., c/o Purchasing Agt., 526 C... let St., sewer line Franklin Ave. ... **FWA.**

Tex., Houston—J. N. Edy, city mgr., ... sewers, $89,500.

Tex., Houston—J. N. Edy, city mgr., ... sewers, $350,000; sanitary sewer facil... Lum Terrace, Golfcrest and Oak Acres ... sion Park Place sewage treatment ... $400,000.

Tex., Port Neches—J. O. Herring, ... sanitary sewerage sys. imprvs., exten... May apply for Federal aid. J. B. Con... Co., Inc., City Hall Annex, Port Arthur.

Wash., Seattle—Sewer, 35th Ave. W... W. McGraw to Roy Sts. $30,899. C. L... telle, city engr.

B. C., Vancouver — Sewers, waterma... Little Mountain Area, $30,000. CD 3/16... 3/18.

N. S., Amherst—Municipality, sew... Etters Brook, etc. $25,000

Ont., St. Catherines—Granthano Tw... K. V. Brown, 148 King St., 2½ mi. ... sewerage sys. $70,000. D. G. Ure, 24... St., engr.

Ont., Scarboro—Scarboro Twp., c/o ... Stewart, clk., incinerator. $50,000. ... Baird, 1600 Kingston Rd., Toronto, engr.

Ont., Toronto—Etobicoke Twp., made ... exten. trunk sewer and laterals in ... Dist. $87,640; Silver Birches Dist. ... Meadowvale Dist. $20,300; Sunnylea ... $30,500. F. M. McArthur, Islington, engr.

Que., Montreal North (Postal Dist. ... treal)—Incinerator. $40,000.

BIDS ASKED

Bids Asked June 2

Wis., Beloit—City, 5,929 ft. 8 and ... sanitary sewers in Arlington, Bayliss, ... Kenwood, Roosevelt and Prairie Aves. ... Popelka, city engr.

Bids Asked June 3

†**Tex., San Antonio**—City, c/o B. Maver... mayor, sewage treatment plant imprv... 41-401, $86,000. FWA. Plans deposit ... R. F. Helland, W. E. Simpson Co., ... Beretta and F. T. Drought, Frost Bank ... engrs. CD 4/19—ENR 4/22.

Bids Asked June 4

†**Va., Fairfax**—Fairfax Co., Fairfax ... lin. ft. 8- to 12-in. sanitary sewers, 14... cal ft. manholes, 4,685 lin. ft. 2- and ... asbestos-cement watermains, 4 fire hyd... concrete sewage pump. station, 2,600 l... 8-in. asbestos cement force main in Ac... Massey & Johnson, Fairfax, engrs.

Bids Asked June 5

R. I., Warren—Town, F. Brocher, chn. ... Com., 10 Martin St. force main and ... sewer, Wood, Liberty and Water Sts. ... Plans deposit $10. Metcalf & Eddy, 17... ler Bldg., Boston, Mass., engrs. CD 4/... 4/8.

Bids Asked June 7

Conn., Hamden—Bd. Sewer Comrs. ... Hall, 7,725 lin. ft. 15-in. tile sewers ... Pershing St. and Dixwell Ave. $115,0... Walden Wright, Town Hall, engr. CD ... ENR 5/6.

Bids Asked June 10

D. C., Wash.—District Comrs., D... Bldg., storm water sewer between Ana... River at Poplar Point and Portland St. ... deposit $25.

LOW BIDDERS

†**Conn., Bridgeport**—City, Hy. Comr., ... 17, Johnson's Creek interceptor sewer ... 6-107, from Frank B. O'Neil & Son, 22 ... St., Hartford, **$64,900. FWA.** CD 3/... 5/13.

Ill., Chicago—Sanitary Dist. of Chica... S. Michigan Ave. May 13, water cooled ... ers, vapor heater repairs, Contr. 42-... Independent Boiler & Tank Co., 1249 N. ... St., **$30,594,** laying, installing sludge ... LD, from Santucci Constr. Co., Skokie, ...

JUNE 3